Vapor Tightness Certification Form

DEQ Virginia Department of Environmental Quality	Name of Certifying Facility: (please print or stamp) Tank truck Certification date_____ **Tank truck Certification Expiration Date**_____	Form for cargo tank truck vapor tightness testing: Air regulation for vapor tightness: VA SAPCB Article 4-37, 40 CFR 60.505, 40 CFR 63.425(e) and 40 CFR 63.11092(f). **EPA Reference Method 27** **MACT R Annual Certification - Allowed Pressure Change** (tank truck ≥ 2500 gallons) 1.0 - inch ☐ (tank truck 1500-2499 gallons) 1.5 - inch ☐ (tank truck 1,499 to 1,000 gallons) 2.0 - inch ☐ (tank truck less 999 gallons) 2.5 - inch ☐

Tank Truck Owner:			Address:		
Tank Mfg_____ Year of Mfg_____	Tank Unit or Fleet #:_____ serial #:_____ Type: ☐ Truck Tank ☐ Transport		Total Tank Truck Capacity Gallons _____ Individual Compartment Capacity 1_____2_____3_____4_____5_____6_____		
Overfill Protection System ☐ Good ☐ Faulty ☐ Repaired			Type Overfill Protection System ☐ Optic ☐ Thermister ☐ Other		
☐ Yes ☐ No	Connect static electrical ground to tank		☐ Yes ☐ No	Temp Stabilization	Testing location:
☐ Yes ☐ No	Purged lines of liquid		☐ Yes ☐ No	Open & Close each dome cover	
☐ Yes ☐ No	Purged tank compartments of Vapor:		☐ Yes ☐ No	Connect compartments of tank internally	
Check Method ☐	☐ Load of Non-Volatile		☐ Yes ☐ No	Attach test cap to vapor recovery coupling	
	☐ Steam cleaned		☐ Yes ☐ No	Connect pressure-vacuum supply & pressure relief valve to shut-off valve	
	☐ Purge each compartment with air for 20 minutes		☐ Yes ☐ No	Attach Manometer (or equivalent) to pressure tap	

EPA METHOD 27 Pressure Test

Increase pressure to a minimum of 18 inches (maximum of 26.6) Water Gauge (Manometer); Indicate starting pressure (Pi) and pressure (Pf) at the end of 5 minutes. Record initial (Ti) and final time (Tf) of test or duration if stop watch is used.

RUN 1				RUN 2				RUN 3			
Water Gauge Readings (Inches)		**Total Inches Water**	Start Time (Ti) Finishing Time (Tf)	**Water Gauge Readings (Inches)**		**Total Inches Water**	Start Time (Ti) Finishing Time (Tf)	**(Inches)**		**Total Inches Water**	Start Time (Ti) Finishing Time (Tf)
9.00	**9.00**	**18.00**	**0:00**	**9.00**	**9.00**	**18.00**	**0:00**	**9.00**	**9.00**	**18.00**	**0:00**
		Pi=	**Ti=**			**Pi=**	**Ti=**			**Pi=**	**Ti=**
		Pf=	**Tf=**			**Pf=**	**Tf=**			**Pf=**	**Tf=**
		a=	**Tf-Ti =**			**b=**	**Tf-Ti =**			**c=**	**Tf-Ti =**

To obtain a, b, and c take the difference between Pi and Pf respectively.

- A third run or fourth run are only necessary if the truck should fail after the preceding run.
- the difference in two consecutive runs (a–b) or (b–c) must less than or equal to 0.5 inch and
- the average of two consecutive runs (a + b)/2 or (b +c)/2 must be within no more than allowed difference from the initial pressure (see table above).

$|(a-b)|$ =_____ *Average* **(a + b)/2**_____ $|(b-c)|$ = _____ *Average* **(b + c)/2** _____

MACT R - 40 CFR 63.425(E) Internal Vapor Valve Test

After two consecutive pressure runs, with the tank still pressurized to 18 inches water, close all the internal vapor valves, and drop the pressure on the vapor line. Then, reseal the line. Test is the gauge pressure change in the vapor return line. Record initial time (Ti) and Initial pressure (Pi should be zero), then record final time (Tf) and final pressure (Pf). Test is run at least 5 minutes allowing no more than 5 inch pressure increase over that time.

Water Gauge Readings	**Pi = 0-inch**	**Pf =**	**Pf - Pi =**	**Ti =**	**Tf =**	Tf-Ti =

EPA METHOD 27 Vacuum Test

Draw vacuum to 6 inches (maximum of10.0) Water gauge (Manometer); Indicate vacuum Vi at the start and Vf at the end of the 5 minute time frame. Record initial (Ti) and final time (Tf) of test or duration if stop watch is used.

RUN 1				RUN 2				RUN 3			
Water Gauge Readings		**Total Inches Water**	Start Time (Ti) Finishing Time (Tf)	**Water Gauge Readings**		**Total Inches Water**	Start Time (Ti) Finishing Time (Tf)	**Water Gauge Readings**		**Total Inches Water**	Start Time (Ti) Finishing Time (Tf)
3.00	**3.00**	**6.00**	**0:00**	**3.00**	**3.00**	**6.00**	**0:00**	**3.00**	**3.00**	**6.00**	**0:00**
		Vi=	**Ti=**			**Vi=**	**Ti=**			**Vi=**	**Ti=**
		Vf=	**Tf=**			**Vf=**	**Tf=**			**Vf=**	**Tf=**
		a=	**Tf-Ti =**			**b=**	**Tf-Ti =**			**c=**	**Tf-Ti =**

To obtain a, b, and c take the difference between Vi and Vf respectively.

- A third run or fourth run are only necessary if the truck should fail after the preceding run.
- the difference in two consecutive runs (a–b) or (b–c) must be less than or equal to 0.5 inch and
- the average if two consecutive runs (a + b)/2 or (b+c)/2 must be no more than allowed difference from the initial pressure (see table above).

$|(a-b)|$ =_____ *Average* **(a + b)/2**_____ $|(b-c)|$ = _____ *Average* **(b + c)/2** _____

Comments, test, and repairs summary:

Test conducted by:	Approved Tester Signed Name:	Tester approved by DEQ (_____) Region
Tester certification expires on:	Approved Tester Printed Name:	Tester approval date:

Attachments: